CLAIMS

1.   A system for providing integrated control of at least one transport resource provided by at least one communication network service provider comprising:

    at least one Association Controller (AC) connectable to a plurality of

5   communications networks so as to communicate with system entities, wherein the at least one AC is configured to dynamically receive an event registration list (ERL), which includes at least one event, through an interactive exchange of one or more commands with an integrated services controller (ISC) associated with the at least one AC, registering one or more events from the one or more communication services which have

10   a notification interest in said events.

2.   The system of claim 1 wherein the at least one AC is further configured to dynamically receive an ERL through an interactive exchange with each of the system entities which have a notification interest in said at least one event.

3.   The system of claim 1 wherein the at least one AC is further configured to

15   dynamically receive a corresponding message registration list (MRL) through an interactive exchange with the associated at least one ISC, wherein messages described in the MRL relate to handling of the at least one event, where the messages comprise: message primitives and at least one related message payload information element which further comprises requested event context criteria.

20   4.   The system of claim 3 wherein the message primitives comprise at least one of: informational, request and instructional action types each of which is dependent on a purpose associated with handling of the least one event, wherein the purpose

includes at least one of: control, coordination, and negotiation with other at least one system entities.

5. The system of claim 3 wherein the event context criteria comprises at least one of: identification of system entities, system entity state information, event attributes, and event attribute values.

6. The system of claim 3 wherein the at least one ISC is further configured to dynamically receive a MRL through an interactive exchange with the at least one system entity of at least one message, wherein the at least one message includes the at least one related message payload information element.

7. The system of claim 1 wherein the at least one AC is further operative to provide auto-discovery of the at least one of the available discrete event notifications that can be delivered to the at least one ISC on behalf of at least one service logic entity.

8. The system of claim 7 wherein the at least one AC is further operative to dynamically augment or modify an ERL through negotiation of the registration of the at least one available discrete event with the at least one ISC on behalf of at least one service logic entity.

9. The system of claim 3 wherein the at least one AC provides message dispatching to facilitate sending and receiving of messages to the at least one other system entity in order to coordinate communication transport association control.

10. The system of claim 9 wherein the at least one AC is further operative to provide auto-discovery of the messages that can be delivered to the at least one ISC on behalf of at least one service logic entity.

11.   The system of claim 10 wherein the at least one AC is further operative to dynamically modify the MRL through negotiation of registration of the messages with the at least one ISC on behalf of at least one service logic entity.

12.   The system of claim 9 wherein the plurality of system entities may include: at least on other AC, at least one association state manager (ASM), a message broker (MB), an integrated service controller (ISC), at least one transport connectivity controller (TCC), and one or more the at least one service logic entities.

13.   The system of claim 9 wherein the at least one AC is further configured to provide for sending and receiving of the messages through use of a system entity naming identification scheme for the at least one system entity for the one or more of the events and messages registered to be received by the at least one service logic entity.

14.   The system of claim 9 wherein the at least one AC provides for dynamic configuration of message profiles comprised of definitions of message primitives and event context criteria for support of interoperability of exchange of the messages with the at least one system entity.

15.   The system of claim 12 wherein the at least one AC is further configured to perform at least one of: configuration, control and coordination of the at least one ASM.

16.   The system of claim 15 wherein the configuration of the at least one ASM comprises initialization of the at least one of ASM and at least transferring of ERL configuration from a related at least one AC to the at least one ASM.

17.   The system of claim 16 wherein the at least one ASM applies all or part the ERL relative to the communication association state criteria the at least one ASM manages.

18.   The system of claim 16 wherein the at least one ASM is further operative to provide auto-discovery of the messages that can be delivered to the at least one AC on behalf of the at least one service logic entity.

19.   The system of claim 18 wherein the at least one ASM is further operative to dynamically modify the MRL through negotiation of registration of the at least one message with the at least one AC on behalf of the at least one service logic entity.

20.   The system of claim 15 wherein the at least one AC coordination of the at least ASM comprises at least one of: high level event monitoring, event validation, and coordination of the modification, augmentation, and releasing of communication association requests on behalf of a at least one directing service logic entity.

21.   The system of claim 15 wherein the at least one AC control of the at least one ASM comprises establishing an appropriate ASM based on state criteria requirements and transferring at least one MRL registration, state initialization, parameter initialization, deconstruction, and high-level state management for said at least one ASM.

22.   The system of claim 15 wherein an ASM embodies a state model that manages communication association state criteria and is operative to process received notifications of the events and generate the messages as a result of internal events that are sent to the at least one other system entity.

23.   The system of claim 22 wherein the at least one ASM provides the mapping of messages received from the at least one other system entity or transport level

events corresponding to at least one transport entity, to at least one registered event

detection state of said state model.

24.   The system of claim 23 wherein the at least one transport entities may

include at least one of: access portal (AP), transport channel access bridge (TCAB), and

5   transport channel (TC).

25.   The system of claim 22 wherein the ASM state model comprises at least

one of: a logical state representing at least one point in communication association

session processing and at least one associated event detection points, wherein the at leas

one associated detection points may comprise at least one of: authorization, information

10   collection, establishment, mid-association modification, and releasing of at least one

communication association.

26.   The system of claim 22 wherein the ASM state model provides concurrent

representation of at least one of: an originating, terminating, and intermediate point of at

least one communication association.

15   27.   The system of claim 24 further including at least one TCC configured to

communicate and manage the at least one transport entity through messaging exchanged

with the at least one of: the at least one AC and the at least one ASM.

28.   The system of claim 27 wherein each of the at least one TCC is each

associated with one of: an access portal (AP), transport channel access bridge (TCAB),

20   and transport (TC).

29.   The system of claim 27 wherein each of the TCC's map to one or more of

the ACs.

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30. The system of claim 28 wherein the at least one TCC is configured to provide connectivity management for multimedia and N-way connectivity by facilitating control of the APs and TCABs and creation, modification, and deletion of transport channels.

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31.   A method of providing integrated control of at least one transport resource

provided by at least one communication network service provider comprising:

identifying at least one Association Controller (AC) which is connectable to a

plurality of communications networks so as to communicate with system entities;

5   dynamically receiving at the at least one AC an event registration list (ERL),

which includes at least one event, through an interactive exchange of one or more

commands with an integrated services controller (ISC) associated with the at least one

AC; and

registering one or more events from the one or more communication services

10   which have a notification interest in said events.

32.   The method of claim 31 wherein the at least one ISC is further configured

to dynamically receive an ERL through an interactive exchange with each of the system

entities which have a notification interest in said at least one event.

33.   The method of claim 31 wherein the at least one AC is further configured

15   to dynamically receive a corresponding message registration list (MRL) through an

interactive exchange with the associated at least one ISC, wherein messages described in

the MRL relate to handling of the at least one event, where the messages comprise:

message primitives and at least one related message payload information element which

further comprises requested event context criteria.

20   34.   The method of claim 33 wherein the message primitives comprise at least

one of: informational, request and instructional action types each of which is dependent

on a purpose associated with handling of the least one event , wherein the purpose

includes at least one of: control, coordination, and negotiation with other at least one system entities.

35.   The method of claim 33 wherein the event context criteria comprises at least one of: identification of system entities, system entity state information, event

5   attributes, and event attribute values.

36.   The method of claim 33 wherein the at least one ISC is further configured to dynamically receive a MRL through an interactive exchange with the at least one system entity of at least one message, wherein the at least one message includes the at least one related message payload information element.

10   37.   The method of claim 31 wherein the at least one AC is further operative to provide auto-discovery of the at least one of the available discrete event notifications that can be delivered to the at least one ISC on behalf of at least one service logic entity.

38.   The method of claim 37 wherein the at least one AC is further operative to dynamically augment or modify an ERL through negotiation of the registration of the at

15   least one available discrete event with the at least one ISC on behalf of at least one service logic entity.

39.   The method of claim 33 wherein the at least one AC performs the step of message dispatching to facilitate sending and receiving of messages to the at least one other system entity in order to coordinate communication transport association control.

20   40.   The method of claim 39 wherein the at least one AC is further operative to provide auto-discovery of the messages that can be delivered to the at least one ISC on behalf of at least one service logic entity.

41.   The method of claim 40 wherein the at least one AC is further operative to dynamically modify the MRL through negotiation of registration of the messages with the at least one ISC on behalf of at least one service logic entity.

42.   The method of claim 39 wherein the plurality of system entities may

5   include: at least on other AC, at least one association state manager (ASM), a message broker (MB), an integrated service controller (ISC), and one or more the at least one service logic entities.

43.   The method of claim 39 wherein the at least one AC is further configured to provide for sending and receiving of the messages through use of a system entity

10   naming identification scheme for the at least one system entity for the one or more of the events and messages registered to be received by the at least one service logic entity.

44.   The method of claim 39 wherein the at least one AC provides for dynamic configuration of message profiles comprised of definitions of message primitives and event context criteria for support of interoperability of exchange of the messages with the

15   at least one system entity.

45.   The method of claim 42 wherein the at least one AC is further configured to perform at least one of: configuration, control and coordination of the at least one ASM.

46.   The method of claim 45 wherein the configuration of the at least one ASM

20   comprises initialization of the at least one of ASM and at least transferring of ERL configuration from a related at least one AC to the at least one ASM.

47.   The method of claim 46 wherein the at least one ASM applies all or part

the ERL relative to the communication association state criteria the at least one ASM

manages.

48.   The method of claim 16 wherein the at least one ASM is further operative

5   to provide auto-discovery of the messages that can be delivered to the at least one AC on

behalf of the at least one service logic entity.

49.   The method of claim 48 wherein the at least one ASM is further operative

to dynamically modify the MRL through negotiation of registration of the at least one

message with the at least one AC on behalf of the at least one service logic entity.

10   50.   The method of claim 45 wherein the at least one AC coordination of the at

least ASM comprises at least one of: high level event monitoring, event validation, and

coordination of the modification, augmentation, and releasing of communication

association requests on behalf of a at least one directing service logic entity.

51.   The method of claim 45 wherein the at least one AC control of the at least

15   one ASM comprises establishing an appropriate ASM based on state criteria

requirements and transferring at least one MRL registration, state initialization, parameter

initialization, deconstruction, and high-level state management for said at least one ASM.

52.   The method of claim 45 wherein an ASM embodies a state model that

manages communication association state criteria and is operative to process received

20   notifications of the events and generate the messages as a result of internal events that are

sent to the at least one other system entity.

53.   The method of claim 52 wherein the at least one ASM provides the

mapping of messages received from the at least one other system entity or transport level

events corresponding to at least one transport entity and to at least one registered event

detection state of said state model.

54.   The method of claim 53 wherein the at least one transport entities may

include at least one of: access portal (AP), transport channel access bridge (TCAB), and

5   transport channel (TC).

55.   The method of claim 52 wherein the ASM state model comprises at least

one of: a logical state representing at least one point in communication association

session processing and at least one associated event detection points, wherein the at leas

one associated detection points may comprise at least one of: authorization, information

10   collection, establishment, mid-association modification, and releasing of at least one

communication association.

56.   The method of claim 52 wherein the ASM state model provides

concurrent representation of at least one of: an originating, terminating, and intermediate

point of at least one communication association.

15   57.   The method of claim 31 wherein the at least one AC is further configured

as a child member within a group, wherein all the at least one ACs within the group are

related to a parent AC that manages a transport level resource group of related individual

transport level resources or a group of related AC groups.

58.   The method of claim 53 further comprising the step of employing at least

20   one TCC configured to communicate and manage the at least one transport entity through

messaging exchanged with the at least one of: the at least one AC and the at least one

ASM.

59.   The method of claim 58 wherein each of the at least one TCCs is each associated with one of: an access portal (AP), transport channel access bridge (TCAB), and transport (TC).

60.   The method of claim 59 wherein each of the at least one TCC's map to one or more of the ACs.

61.   The method of claim 59 wherein the at least one TCC is configured to provide connectivity management for multimedia and N-way connectivity by facilitating control of the APs and TCABs and creation, modification, and deletion of transport channels.